Claims

Claim 1:   Amorphous silica particles, wherein an oil absorption measured
by JISK 6217-4 (a carbon black for rubber – basic characteristics)
is more than 400 ml/100g, the maximum value of $\Delta Vp/\Delta logRp$
(where Vp is the pore volume [mm^3/g] and Rp is the pore radius
[nm]) is 250 mm^3/nm·g or more in the pore distribution curve
obtained by the nitrogen adsorption isotherm method, and pore
peak radius when the $\Delta Vp/\Delta logRp$ value is maximum is 3 nm or
more.

Claim 2:   The amorphous silica particles according to Claim 1, wherein the
maximum value of $\Delta Vp/\Delta logRp$ (where Vp is the pore volume
[mm^3/g] and Rp is the pore radius [nm]) is 500 mm^3/nm·g or
more in the pore distribution curve obtained by the nitrogen
adsorption isotherm method, and the pore peak radius when the
$\Delta Vp/\Delta logRp$ value is maximum is 10 nm or more.

Claim 3:   The amorphous silica particles according to Claim 2, wherein the
maximum value of $\Delta Vp/\Delta logRp$ (where Vp is the pore volume
[mm^3/g] and Rp is the pore radius [nm]) is 1000 mm^3/nm·g or
more in the pore distribution curve obtained by the nitrogen
adsorption isotherm method, and the pore peak radius when the
$\Delta Vp/\Delta logRp$ value is maximum is 15 nm or more.

Claim 4:   The amorphous silica particles according to any one of Claims 1
to 3, wherein the average particle size is 0.5 to 40 μm.

Claim 5:   The amorphous silica particles according to any one of Claims 1
to 4, wherein the bulk density is 20 to 200 g/l.

Claim 6:   The amorphous silica particles according to any one of Claim 1 to

5, obtained by baking.

Claim 7: A process for preparing amorphous silica, wherein the silica particles are baked at 200 – 990°C.

Claim 8: Process as Claimed in claim 7, wherein at least one amorphous silica having the oil absorption of at least 340 ml/100 g is baked at 200 – 990°C.

Claim 9: Process as claimed in Claim 7 or 8 , wherein the time for baking is 10 minutes to 5 hours.

Claim 10: Process as claimed in Claims 8 to 9, wherein the resulting amorphous silica exhibits an oil absorption of more than 400 ml/100 g.

Claim 11: Process as claimed in any one of Claims 7 to 10, comprising the step of reacting at least one alkali metal silicate with at least one mineral acid.

Claim 12: Process as claimed in any of Claims 7 to 11, comprising the step of adjusting the pH value of the final silica to 3 to 10 either before or after the drying of the silica slurry.

Claim 13: Use of a silica as claimed in any of Claims 1 to 6 as matting agent or as carrier for pharmaceuticals or agrochemicals or reinforcing agent for various rubbers.

Claim 14: An adsorbent for pharmaceuticals, agrochemicals, comprising the amorphous silica particles according to any one of Claims 1 to 6.

Claim 15: A matting agent, comprising the amorphous silica particles according to any one of Claim 1 to 6.

SUBSTITUTE SHEET (RULE 26)